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ABSTRACT

The aim of education should be the development of morally and intellectually autonomous individuals. The opposite of heteronomy, which means being governed by someone else, autonomy means being governed by oneself. Moral autonomy results from the application of "sanctions by reciprocity" in the context of mutual respect between adults and children. Differing from reward and punishment, sanctions by reciprocity provide children the opportunity to consider other people's points of view and motivate children to construct rules of conduct by coordinating viewpoints with others. As Piaget believed, when adults use reward and punishment, they reinforce children's natural heteronomy; alternately, adults stimulate the development of autonomy when they exchange points of view with children. As Piaget additionally pointed out, children acquire moral values in the same way they acquire knowledge--by constructing beliefs internally through interaction with the environment. Current educational practice blocks children's development of autonomy in both moral and intellectual realms. Therefore, the time has come to plan a "Copernican revolution" in education, shifting the focus of education from what educators do to children to how children develop. Educators should stimulate children's thinking by bringing different points of view into confrontation, since the exchange of points of view contributes to children's intellectual, social, affective, moral, and political development. (RH)

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Autonomy: The Aim of Education Envisioned by Piaget*

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Every textbook on educational psychology published now includes a discussion of Piaget's theory. These books almost always state that the importance of this theory lies in the stages Piaget found and the fact that children cannot be expected to understand many concepts before attaining a certain developmental level. This is an extremely limited interpretation of Piaget's theory. It is also not a useful presentation, as it does not show any direction for what teachers can do to improve schools. This limited interpretation of Piaget's theory is particularly unfortunate when schools are known not to be working. Low test scores, physical violence, alcohol and drug abuse, alienation, and vandalism are only some of the problems plaguing the nation's schools today.

The purpose of this article is to clarify Piaget's ideas about education, and to show that the two most important ideas Piaget found in his own theory are autonomy and constructivism, rather than the stages. In one of the two books he published on education, he stated that a school based on his theory would be radically different from those in existence today because its very aim would be different (Piaget, 1948). For him, the aim of education was intellectual and moral autonomy. This goal is in sharp contrast with the conservative goal of traditional education, which is to transmit knowledge and values from one generation to the next.

This article is divided into three parts. In the first part, I discuss the moral aspect of autonomy. In the second part, I focus on its intellectual aspect. In the third part, I conclude with autonomy as the aim of education and give some examples of the kind of practice this goal implies.

Moral Autonomy

Autonomy means being governed by oneself. It is the opposite of heteronomy, which means being governed by someone else. An extreme example of the morality of

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autonomy can be seen in Elliott Richardson in the Watergate coverup affair.[1] He was the only person under Nixon who was autonomous enough to refuse to obey the boss and resigned from his position. The other people involved in the Watergate coverup affair illustrate the morality of heteronomy. When they were told to tell lies, they obeyed their superior and went along with what they knew to be wrong.

Piaget gave more commonplace examples of the morality of autonomy. In his research (Piaget, 1932), he asked children between the ages of six and fourteen whether it was worse to tell a lie to an adult or to another child. Young, heteronomous children consistently replied that it was worse to tell a lie to an adult. When asked why, they explained that adults can tell when a statement is not true. Older children, in contrast, tended to answer that sometimes one almost has to lie to adults, but it is rotten to do it to other children. This is an example of the morality of autonomy. For autonomous people, lies are bad independently of the reward system, adult authority, and the possibility of being caught.

Piaget made up many pairs of stories about children and asked which one of two children was the worse. Following is an example of such a pair:

> A little boy (or a little girl) goes for a walk in the street and meets a big dog who frightens him very much. So then he goes home and tells his mother he has seen a dog that was as big as a cow.
>
> A child comes home from school and tells his mother that the teacher had given him good marks, but it was not true; the teacher had given him no marks at all, either good or bad. Then his mother was very pleased and rewarded him (p. 148).

Young children systematically manifested the morality of heteronomy by saying that it was worse to say "I saw a dog as big as a cow." Why was it worse? Because dogs are never as big as cows and adults do not believe such stories. Older, more autonomous children, on the other hand, tended to say that it was worse to say

"The teacher gave me good marks" because this lie is more believable.

- - - - - - - - - - -
Figure 1 about here
- - - - - - - - - - -

Figure 1 shows the developmental relationship between autonomy and heteronomy. In this figure, time is represented along the horisontal axis from birth to adulthood. The vertical axis represents the proportion of autonomy in relation to heteronomy, from 0% to 100% autonomy. The dotted line shows the ideal development of an individual. All babies are born helpless and heteronomous. Ideally, the child becomes increasingly more autonomous as he grows older, and as he becomes more autonomous, he becomes less heteronomous. In other words, to the extent that the child becomes able to govern himself, he is governed less by other people.

In reality, most adults did not develop in this ideal way. The great majority stopped developing at a low level as shown by the solid line in Figure 1. Piaget (1948) said that it is a rare adult who is truly moral. This observation can easily be confirmed in our daily life. Newspapers are full of stories about corruption in government and about theft, assault, and murder.

What Makes Some Adults Morally Autonomous?

The important question for educators and parents is what causes some children to become morally autonomous adults. Piaget's answer to this question was that adults reinforce children's natural heteronomy when they use reward and punishment, and they stimulate the development of autonomy when they exchange points of view with children.

When a child tells a lie, for example, the adult can deprive him of dessert or make him write 50 times "I will not lie." The adult can also refrain from punishing the child and, instead, look him straight in the eye with great skepticism and affection and say, "I really can't believe what you are saying because . . . ."

This is an example of an exchange of points of view that contributes to the development of autonomy in children. The child who can see that the adult cannot believe him can be motivated to think about what he must do to be believed. The child who is raised with many similar opportunities can, over time, construct for himself the conviction that it is best in the long run for people to deal honestly with each other.

Punishment leads to three possible outcomes. The most common one is calculation of risks. The child who is punished will repeat the same act but try to avoid being caught the next time. Adults can sometimes even be heard saying, "Don't let me catch you doing that again!" Sometimes, the child stoically decides ahead of time that even if he is caught, the price will be worth paying for the pleasure he will have. The second possible outcome of punishment is blind conformity. Some compliant children become perfect conformists because conformity assures them of security and respectability. When they become complete conformists, children do not have to make decisions any more, as all they have to do is obey. The third possible outcome is revolt. Some children are perfectly "good" angels for years but decide at a certain point that they are tired of pleasing their parents and teachers all the time, and that the time has come for them to begin living for themselves. They may thus even begin to engage in various behaviors that characterize delinquency. These behaviors may look like autonomous acts, but there is a vast difference between autonomy and revolt. In a revolt, the person is against conformity, but nonconformity does not necessarily make a person morally autonomous.

Punishment thus reinforces children's heteronomy and prevents them from developing autonomy. While rewards are nicer than punishments, they, too, reinforce children's heteronomy. Children who help parents only to get money, and those who study only to get good marks are governed by others, just like children who are

"good" only to avoid being punished. Adults exercise power over children by using rewards and punishments, and it is these sanctions that keep them obedient and heteronomous.

If we want children to develop the morality of autonomy, we must reduce our adult power by refraining from using rewards and punishments, and encourage them to construct for themselves their own moral values. For example, the child has the possibility of thinking about the importance of honesty only if he is not punished for telling lies and is, instead, confronted with the fact that other people cannot believe or trust him.

The essence of autonomy is that children become able to make decisions for themselves. Autonomy is not the same thing as complete freedom. Autonomy means taking relevant factors into account in deciding what the best course of action might be for all concerned. There can be no morality when one considers only one's own point of view. If one takes other people's point of view into account, one is not free to tell lies, break promises, or be inconsiderate.

Piaget was realistic enough to say that in the reality of life, it is impossible to avoid punishments. Streets are full of cars, and we obviously cannot allow children to touch stereo sets and electric outlets. Piaget, however, made an important distinction between punishment and sanctions by reciprocity. Depriving the child of dessert for telling a lie is an example of a punishment, as the relationship between a lie and dessert is completely arbitrary. Telling him that we cannot believe what he said is an example of a sanction by reciprocity. Sanctions by reciprocity are directly related to the act we want to sanction and to the adult's point of view, and have the effect of motivating the child to construct rules of conduct for himself, through the coordination of viewpoints.

Piaget gave six examples of sanctions by reciprocity. I would like to give

four of the six examples. The first one is temporary or permanent exclusion from the group. When a group is listening to a story and a child disrupts the group, for instance, the teacher often says, "You can either stay here without bothering the rest of us, or I must ask you to go to the book corner and read by yourself." Whenever possible, the child must be given the possibility of deciding when he can behave well enough to return to the group. Mechanical time limits serve only as punishment, and children who have served the required time often feel perfectly free to commit the same misdeed again.

The second type of sanction by reciprocity is appeal to the direct and material consequence of the act. I have already given an example of this type of sanction in connection with children's lies.

The third type of sanction by reciprocity is depriving the child of the thing he has misused. Sometime ago, I was in a classroom of four- and five-year-olds for three days in succession. The room was rather small for a class of about 25 children, and about a third of its surface was set aside for block constructions which stayed up throughout my visit. I was surprised that the elaborate constructions stayed up for three days and that the children were extremely careful not to disturb anybody else's work when they went to the block area from time to time to modify their products. When I asked the teacher how she got the children to be so careful, she explained that she was very strict at the beginning of the year and did not let children go in the block area if they knocked anything over. Later, she said, she negotiated with individual children the right to go in that area when they knew that this right had to be earned. The teacher's goal here was not just to produce a particular behavior, but to create the possibility for all the children to use blocks autonomously. The teacher wanted to create a situation in which the children could trust their classmates to respect their productions.

The fourth type of sanction by reciprocity is restitution. For example, if a young child spills paint on the floor, an appropriate reaction may be to say, "Would

you like me to help you clean it up?" Later in the year, it may be enough just to ask, "What do you have to do?"

One day, in a kindergarten class, a child came up to the teacher crying because his art project had been damaged. The teacher turned to the class and said that she wanted the person who broke the object to stay with her during recess so that she could help him repair it. The child responsible for the breakage could see the point of view of the victim, and was encouraged to construct for himself the rule of restitution. When children are not afraid of being punished, they are perfectly willing to come forward and make restitution. The teacher helped the child repair the broken object and told him that next time something similar happens, she wanted him to tell her so that she could help him fix the object again.

Piaget pointed out that all the preceding sanctions by reciprocity can quickly degenerate into punishments if there is no relationship of mutual affection and respect between the adult and the child. Mutual respect is, in fact, essential for the child's development of autonomy. The child who feels respected for the way he thinks and feels is likely to feel respect for the way adults and other children think and feel.

Constructivism

Piaget's theory about how children learn moral values is fundamentally different from other theories and from common sense. The common-sense view is that the child acquires moral values by internalizing them from the environment. According to Piaget, children acquire moral values not by internalizing or absorbing them from the environment but by constructing them from the inside, through interaction with the environment. For example, no child is taught that it is worse to tell a lie to an adult than to another child. Yet young children construct this belief out of what they have been told. Likewise, no child is taught that it is worse to say "I saw a dog as big as a cow" than to say "The teacher gave me good marks." But young children make such judgments by putting into relationship everything they have

been told. Fortunately, they go on to construct other relationships and many of them end up believing that it is worse to say "The teacher gave me good marks."

It is probably safe to say that most of us have been punished when we were children. To the extent that we also had the possibility of coordinating viewpoints with others, we had the possibility of becoming more autonomous. Elliott Richardson was probably raised to make decisions by considering other people's points of view, rather than by considering only the reward system.

The Watergate affair illustrates Piaget's view that autonomy is not only moral but also intellectual. The men who ended up going to prison were, of course, immoral, but they can also be said to have been unbelievably stupid, like young children who are too egocentric to know that the truth will come out sooner or later anyway. I would now like to discuss the intellectual aspect of autonomy.

Intellectual Autonomy

In the intellectual realm, too, autonomy means being governed by oneself, and heteronomy means being governed by somebody else. An extreme example of intellectual autonomy is the work of Copernicus, or of the inventor of any other revolutionary theory in the history of science. Copernicus invented the heliocentric theory when everybody else believed that the sun revolved around the earth. He was even laughed off the stage, but was autonomous enough to remain convinced of his own idea. An intellectually heteronomous person, by contrast, unquestioningly believes what he is told, including illogical conclusions, slogans, and propaganda.

A more commonplace example of intellectual autonomy is my niece, who used to believe in Santa Claus. When she was about six, she surprised her mother one day by asking, "How come Santa Claus uses the same wrapping paper as we do?" Her mother's "explanation" satisfied her for a few minutes, but she soon came up with the next question: "How come Santa Claus has the same handwriting as Daddy?" This child had

her own way of thinking, which was different from what she had been taught.

According to Piaget, the child acquires knowledge, too, by constructing it from within, rather than by internalizing it directly from the environment. Children may internalize certain bits of knowledge for a while, but they are not passive vessels that merely hold what is poured into their heads. A more precise way of discussing constructivism is to say that children construct knowledge by creating and coordinating relationships. When my niece put Santa Claus into relationship with everything else she knew, she began to feel that something was wrong somewhere.

Unfortunately, in school, children are not encouraged to think autonomously. Teachers use sanctions to get children to give "right" answers. An example of this practice is the use of worksheets. In first-grade arithmetic, for example, if a child writes "4 + 2 = 5," most teachers mark it as being wrong. The result of this kind of teaching is that children become convinced that truth can come only out of the teacher's head. Furthermore, when I walk around a first-grade classroom while children are working on arithmetic worksheets, and stop to ask individual children how they got particular answers, they typically react by grabbing their erasers and erasing like mad, even when their answer is perfectly correct! Already in first grade, many children have learned to distrust their own thinking. Children who are thus discouraged from thinking autonomously will construct less knowledge than those who are mentally active and confident.

If a child says that 4 + 2 = 5, a better reaction is to refrain from correcting him and encourage two children who got different answers to explain their thinking to one another. Alternatively, the teacher can ask the child, "How did you get 5?" Children often correct themselves autonomously as they try to explain their reasoning to someone else. The child who tries to explain his reasoning has to decenter to make sense to the other person. While thus trying to coordinate his point of view with another viewpoint, the child often realizes his own mistake.

An even better way of teaching arithmetic in first grade is by eliminating all instruction and introducing many games such as "Double War." This game is played like "War," except that the sum of two cards is compared with the sum of the opponent's two cards, and the player who has a greater total can take all four cards. Children do not need to be taught sums because they can figure out for themselves the result of each addition. In a game, furthermore, they can exchange points of view and correct each other. This way of learning is much more active and conducive to the development of autonomy than through workbooks. In my current research, I find that children cannot help remembering sums if they play these games often enough.

Having clarified what Piaget meant by moral and intellectual autonomy, I would now like to discuss autonomy as the aim of education by adding my own ideas to what Piaget wrote in 1948.

Autonomy As the Aim of Education

Figure 2 shows autonomy as the aim of education in relation to the goals of education defined today by most educators and the public. I will first discuss the part of each circle that does not overlap with the other and then proceed to the intersection.

- - - - - - - - - - -
Figure 2 about here
- - - - - - - - - - -

The shaded part of the circle to the right (labeled "The goals of most educators and the public") that does not overlap with the other circle stands for the implicit and explicit, intended and unintended heteronomous goals of education as it exists today. This education requires a great deal of memorization to pass one examination after another. All of us who succeeded in school achieved this success by memorizing an enormous number of "right" answers without understanding them or caring about them. All of us remember the relief we felt of being free to forget the things we memorized only

to pass a test. We made these efforts mostly because we were good, obedient conformists in a system that reinforced our heteronomy.

The result of this kind of education is what McKinnon and Renner (1971) and Schwebel (1975) found in their research on college freshmen's ability to think logically at the formal operational level. These college students were those who were successful enough in elementary and high school to enter the university. The percentage found by McKinnon and Renner to be capable of solid logical thinking at the formal level was 25. The percent found by Schwebel was only 20.

Ability to think logically at the formal level belongs to the circle labeled "Autonomy" in Figure 2. More precisely, it belongs to the part of the circle that does not overlap with the other circle, since logical thinking is clearly not a goal of secondary education. After presenting their findings, McKinnon and Renner asked what kind of education these university students received in high school. They concluded that high schools do not teach students to think logically, and that if high-school teachers do not emphasize logical thinking, we must ask who trained these teachers. Their answer was: Universities did. In other words, schools under-emphasize thinking from beginning to end. If students cannot think logically at the formal-operational level, they can certainly not think critically or autonomously.

In the moral realm, too, today's schools reinforce children's heteronomy and unwittingly prevent them from developing autonomy. To enforce adults' rules and standards, schools use grades, gold stars, the detention hall, merits and demerits, and awards. The part of the circle labeled "Autonomy" that does not overlap with the other circle thus stands for intellectual and moral autonomy.

The intersection between the two circles stands for things taught in schools that are useful to the development of autonomy in spite of their conformist goals. The ability to read and write, to do arithmetic, to read maps and charts, and to

situate events in history are examples of what we learned in school that are useful for our adaptation to the environment. If autonomy is the aim of education, attempts must be made to increase the area of overlap between the two circles.

What Kind of Teaching Does Autonomy Imply?

If a person is against "the goals of most educators and the public," people sometimes assume that that person must be against the teaching of academic subjects. I have nothing against academic contents and am, in fact, all for them. But I think the two circles in Figure 2 can be made to overlap more when we teach academic contents in the broader context of fostering the development of autonomy in children.

To illustrate the teaching of a content in the context of autonomy as the broader aim, I would like to describe an afternoon I spent observing a sixth grade class. I do not know enough about the teaching of grammar to judge the desirability of diagraming sentences, but will take this example to discuss the importance of thinking stimulated by social interaction. The class was divided into six subgroups of four or five pupils each. When I arrived after lunch, the teacher put a rather tricky sentence on the board and gave the groups 20 minutes to diagram it. A representative of each group went to the board when the time was up and put a diagram on it. Two of the six were immediately erased, as they duplicated two other groups'. Individual students then offered well-reasoned arguments in favor of one diagram, or to show that one was inadequate. The author of the version under attack would then defend it vigorously. The arguments thus continued with intensity until it was time for recess. By that time, everybody had agreed that two of the four versions could not be defended and had to be erased.

When the children returned from recess, the teacher asked if the class wanted the answer. Some said "Yes," but others answered, "No, because you'll give us the wrong answer just to see if you can trick us!" The teacher admitted that he indeed intended to do that. The arguments and counterarguments continued, and the class

finally agreed on the superiority of one diagram.

This class spent an entire afternoon on one sentence. But I was left with the impression that the children thought so hard about each well-articulated idea that they were thoroughly convinced of the superiority of the final diagram. Many pupils offered wrong ideas along the way, but they were encouraged to defend their opinion until they were convinced that they were wrong. Children learn by modifying old ideas, according to constructivism, rather than by accumulating new bits. A debate about the superiority of one idea or another is good because it encourages children to think critically by putting different opinions into relationship, and to modify old ideas autonomously when they are convinced that a new idea is better.

This teacher taught an academic content in the context of trying to foster the development of intellectual and moral autonomy. I say "intellectual autonomy" because children can develop it only when all ideas, including wrong ones, are respected. I say "moral autonomy" because children can develop it only if their ideas are taken seriously into account in making decisions. Furthermore, children mobilize their intelligence and the totality of their knowledge when they have to take a stand and confront other opinions. This kind of coordination of viewpoints is thus far better than traditional methods that only aim at getting students to give "right" answers.

Perret-Clermont's research (1980) confirms the importance Piaget attributed to social interaction. After showing that the exchange of points of view is indispensable for the child's moral development (Piaget, 1932), Piaget went on to say that these exchanges are equally necessary for children's development of logic (Piaget, 1947). Taking this statement as a hypothesis, and basing her work also on Inhelder, Sinclair, and Bovet's work (1974), Perret-Clermont studied the effects of social interaction on children's cognitive development. She concluded that the confrontation of ideas among children for only ten minutes often results in more

advanced levels of logical reasoning, with generalization to areas not dealt with in the experiment.

There is a common factor between Perret-Clermont's experiments and the examples given earlier of the teaching of sixth grade grammar and first grade arithmetic: the stimulation of thinking through the confrontation of points of view among peers. Social life in the classroom can thus not be considered apart from its intellectual side. The exchange of points of view contributes indissociably to the child's intellectual, social, affective, moral, and political development.

I would like to give a few more examples of the teaching of academic contents to show that each subject will be taught differently when it is taught in the context of autonomy as the broader aim. In history, we can suggest biographies (of Columbus, Napoleon, Robert E. Lee, etc.) to enable children to approach historical facts from the perspective of individuals. It is easier to construct history by approaching facts through subjective viewpoints than by being given dates and "objective" interpretations. A set of questions that is almost always appropriate is "What do you think of . . .?" "Does everybody agree with . . .?" "Is there anyone who has a different opinion?" At school, children are almost never asked what they honestly think, and they are seldom told two different interpretations of the same event. By asking them what they think of one interpretation or another, we can stimulate their thinking. These discussions lead to intellectual autonomy as well as a better comprehension of contents, because children can put things into relationships actively in their own way when they evaluate their classmates' ideas about a variety of perspectives.

In literature, we can ask for different interpretations of a poem or personal reactions to a novel. The important thing, again, is to encourage the comparison and evaluation of different reactions. In science, we can suggest projects aimed at producing certain effects, such as the making of cars for the soapbox derby. To

produce a desired effect, children have to understand the relevance of various factors such as friction, the center of gravity, and the size of the wheels in this case. Other examples of the teaching of contents in the context of autonomy as the broader aim can be found in Kamii (1982) and Kamii and DeVries (1978, 1980).

The examples given above must not be interpreted to mean that Piaget's theory implies only another way of teaching the same traditional academic contents. Autonomy as the aim of education implies a kind of education that is very different from the conformist education practiced all over the world today.

Piaget's way of conceptualizing the aim of education is unique in that it is rooted in a scientific theory of how human beings acquire moral values and knowledge. While many reformers in education such as Rousseau, Montessori, Dewey, Decroly, and Freinet had ideas similar to Piaget's, they based their objectives and methods on personal opinions rather than on scientific theories.

Piaget's theory continues to be completed and modified in its details, but constructivism, the most fundamental part, has never been disproved. No one has disproved the idea that children acquire moral values and knowledge by construction from within, by putting things into relationships, and that social interactions are essential for this construction to take place. According to Piaget, furthermore, the honest exchange of points of view is bound to lead to autonomy in the long run. ~~Most educators, however, are underdeveloped compared to their potential.~~ Below are two quotes stating these ideas. The first one deals with the intellectual aspect of autonomy, and the second concerns its moral side.

> . . . cooperation[2] alone leads to autonomy. With regard to logic, cooperation is at first a source of criticism; thanks to the mutual control which it introduces, it suppresses both the spontaneous conviction that characterizes egocentrism and the blind faith in adult

> authority. Thus, discussion gives rise to reflection and objective verification. But through this very fact cooperation . . . leads to the recognition of the principles of formal logic in so far as these normative laws are necessary to common search for truth (Piaget, 1932, p. 403).

> . . . moral autonomy appears when the mind regards as necessary an ideal that is independent of all external pressure. Now, apart from our relations to other people, there can be no moral necessity . . . . Autonomy . . . appears only with reciprocity, when mutual respect is strong enough to make the individual feel from within the desire to treat others as he himself would wish to be treated (Piaget, 1932, p. 196).

My conviction about the importance of autonomy is based partly on the fact that most adults who went to traditional schools came out underdeveloped compared to their potential. If we examine "normal adult individuals who are representative of the honest, human average, the truly logical persons who are masters of their reasoning power are as rare as the truly moral men who exercise their conscience with all their strength (Piaget, 1948, p. 50)." Piaget's theory, in other words, shows the biological potential with which most human beings are born, and the fact that they turn out underdeveloped compared to their potential. Autonomy as the aim of education is a plea for educators to stop hindering children's development of their potential, so that it can be allowed to blossom and bear fruit.

Educators are now trying to solve a large variety of problems such as low test scores, physical violence, apathy, truancy, alcoholism, drug abuse, teenage pregnancies, and vandalism as if these were separate problems. Their solutions

are to use high-pressure instruction and tests to raise academic achievement, exclusion from school to stop physical violence, policemen and truancy officers, programs about sex, alcohol, and drugs, and budgets to replace broken windows with opaque, unbreakable materials. With autonomy as our goal, we can begin to evaluate this band-aid approach to a seriously ailing patient. Piaget's theory of autonomy suggests not the search for more band-aids but a fundamental reexamination of objectives.

Autonomy as the aim of education is in a sense a new idea that will revolutionize education. In another sense, however, it can be viewed as a return to old human values and relationships. I hope that authors writing about the educational implications of Piaget's theory will soon become convinced that the significance of this theory lies not in the stages he found but in constructivism and autonomy. I am personally outraged by the fact that the legal power of taxation and compulsory education is used to hamper the development of human potential. I am also scandalized by the fact that the educational Establishment of every country I know is characterized by two factors: ignorance and power--ignorance of scientific theory as well as of children. The higher an educator advances in the hierarchy, the more isolated he becomes from real children and classrooms.

There is something comfortable and archaic about all the so-called innovations in education. The time has come to stop being satisfied with these conservative ideas and to plan a Copernican revolution in education. By shifting the focus of our thinking from what we do to children to how children develop, we can begin to view academic subjects and moral education, as well as mental health, from the standpoint of how children construct their own ideas. Children respect the rules they make for themselves. They also work hard to achieve the goals they set for themselves. I call upon educators to take more seriously what Piaget said about the radical reforms implied by his theory.

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Footnotes

*I would like to acknowledge the assistance of Kathleen Gruber, of the University of Illinois at Chicago, and Mieko Kamii, of Wheelock College.

[1]Some people challenge this statement, saying that Mr. Richardson may have decided to be honest out of the fear of being caught. I admit that I do not know enough about Mr. Richardson to make this statement with certitude. I nevertheless give this example because, whether or not the reader agrees about Mr. Richardson's moral autonomy, the example illustrates the idea that corruption is common in government and people who stand up for what is right are rare.

[2]"Cooperation" in Piaget's terminology does not mean "compliance." When we say "Your cooperation will be appreciated" in common parlance, we mean that we are requesting the person's compliance. For Piaget, on the other hand, cooperation meant "to co-operate," with a hyphen, or "to operate together." The words that best express what he meant are "to negotiate" and "to exchange points of view." An argument can thus also be an example of cooperation if it involves the exchange of viewpoints.

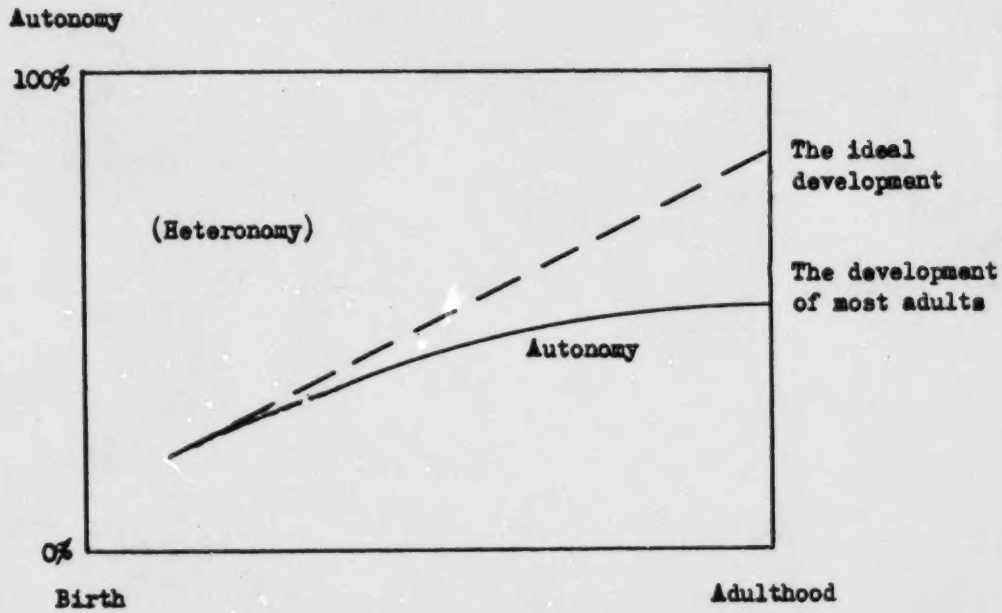

Figure 1

The Developmental Relationship between Autonomy and Heteronomy

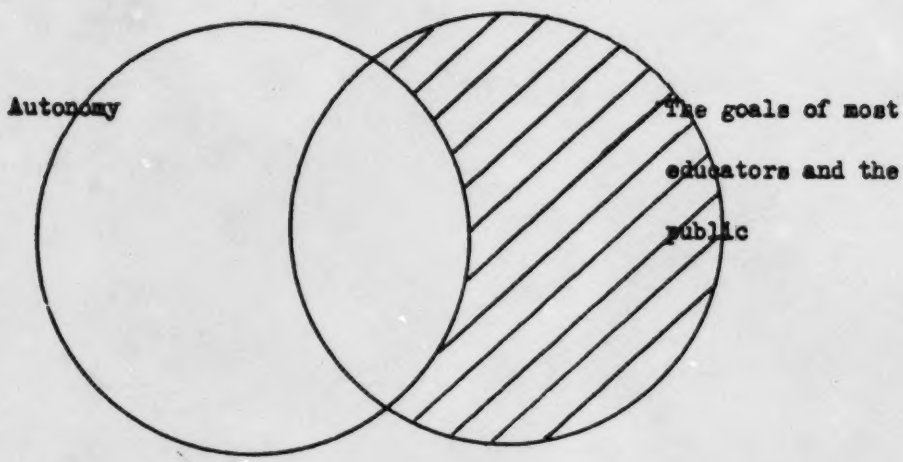

Figure 2

The Relationship between Autonomy and the Goals of Most Educators and the Public